Issue II, Volume iv November 2005

The High Plains Drifter

NATIONAL WEATHER SERVICE
NORTH PLATTE, NE

Lightning Photo by Doug Wolford of Big Springs

Hail photo from Curtis Justin of Chambers

What's Inside	

Comments and suggestions are always welcome. Your feedback is very important to us!

Winter Weather Safety Tips

Winter Weather Awareness Day

November 2, 2005

At home or work have available:

- Flashlights and extra batteries
- Extra food and water
- Extra medicine and baby items
- First-aid supplies
- Heating fuel
- Emergency heat source (ensure proper ventilation)
- Fire extinguisher and smoke alarm
- NOAA Weather radio or battery powered radio
- Food and water for pets

In vehicles:

Carry a winter storm survival kit:

- Mobile phone and charger
- Blankets
- Flashlight and extra batteries
- First-aid kit
- Knife
- Shovel
- Water container
- Sand or cat litter for traction
- High-calorie, non-perishable food
- Extra clothing to stay dry
- Small can and waterproof matches to melt snow
- Tow rope, tool kit, and battery booster cables

- Keep your gas tank near full
- Avoid traveling alone
- Let someone know your timetable and travel route

On the farm or ranch:

- Move animals to sheltered areas
- Haul extra feed to nearby feeding areas
- Have water available for the animals. Make sure pets have food, water, and shelter

Dress for the season!

Wear loose, lightweight, warm clothes in layers. Trapped air insulates.
Outer garments should be tightly woven, water-repellent, and hooded.
Wear a hat. Half your body heat loss can be from the head.
Cover your mouth to protect your lungs from extreme cold.
Mittens, snug at the wrist, are better than gloves.
Try to stay dry.

Winter Weather Definitions

Blizzard Warning – At least 35 mph winds with visibilities less than ¼ mile in snow and blowing snow for 3 hours or longer.

Heavy Snow Warning – An average snow accumulation of 6 inches or more in 12 hours.
Snow Advisory – An average snow accumulation of 3 to 5 inches in 12 hours.

Ice Storm Warning – Widespread ice accumulation of ¼ inch or more making walking and driving extremely hazardous.
Freezing Rain Advisory – Small accumulation of ice (usually less than ¼ inch) which makes walking or driving difficult.

Sleet Warning – Accumulation of ice pellets to ½ inch or more making travel treacherous.
Sleet Advisory – Accumulation of ice pellets to less than ½ inch.

Wind Chill Warning – Wind chill values of -30˚F or colder and wind speeds of at least 10 mph.
Wind Chill Advisory – Wind chill values of -20˚F to -29˚F and wind speeds of at least 10 mph.

Winter Storm Warning – A combination of two or more of the following:
Average snow accumulations of at least 6 inches in 12 hours
Freezing rain with ice accumulations of ¼ inch or more
Sleet accumulations of ½ inch or more
Visibilities of ¼ mile or less in snow and blowing snow
Wind speeds from 25 and 34 mph.
Winter Weather Advisory – A combination of two or more of the following:
Average snow accumulations of 3 to 5 inches in 12 hours
Visibilities of ¼ mile or less in snow and blowing snow
Light freezing rain with ice accumulations less than ¼ inch
Sleet accumulations of less than ½ inch
Wind speeds from 25 to 34 mph.

High Wind Warning – Average wind speeds of 40 mph or stronger for at least 1 hour or any wind gust of 58 mph or stronger.
Wind Advisory – Average wind speeds of 30-40 mph for at least 1 hour or any wind gust to 45 mph or stronger.

Winter Weather Safety

Hypothermia

This occurs when the body temperature drops too low. Warning signs of hypothermia include uncontrollable shivering, memory loss, disorientation, slurred speech, drowsiness, and apparent exhaustion. If a person's temperature is below 95˚F, seek medical care immediately. If medical care is not available, begin warming the person slowly.

Get the person into dry clothing and wrap them in a warm blanket covering the head and neck. Do not give the person *hot* beverage or food; *warm* broth is better. Do not warm extremities first. This drives the cold blood toward the heart, and can lead to heart failure.

Cooperative Weather Observer Awards

Marilyn and Tom Peabody
Hay Springs, 15 years

Lois Arnold Gordon
Purdum, 20 years

Julianna and Victor Bodyfield
Ericson 6WNW, 30 years

Karl Menzel
Bassett, 30 years

Cooperative Weather Observer School

In September, Brian Hirsch and Angela Oder attended the Cooperative Network Course at the National Weather Service Training Center in Kansas City. The different types of climate networks were among the other topics discussed during the course.

One of the climate networks, which is looked upon as a national treasure, is the Historical Climate Network. This network was established in 1984 to provide a data set used to detect climate changes over a region rather than a specific location. At least 80 years of temperature and precipitation records are required, with no more than 5 percent of the observations missing.

The North Platte NWS office is fortunate to have an outstanding Cooperative Observer network with a large number of stations which have a long history. There are 53 stations with over 50 years of observations, 31 stations with over 80 years, and 20 stations with over 100 years.

Purdum

The Cooperative Weather Station in Purdum, Nebraska is one of the twenty stations in our area with over 100 years of service. There is also something very special about Purdum that only a handful of stations can be proud of. This station has been in the same family and location since its establishment. This station was established in March of 1902 with T.C. Jackson, on his cattle ranch in Purdum, located in the far northwest corner of Blaine County. Mrs. T.C. Jackson took over observations in December of 1924. Their daughter then continued the family tradition of reporting the temperatures and precipitation daily by becoming the official observer for Purdum in February of 1944. Twenty years ago the family tradition was passed on again to T.C. Jackson's granddaughter, Lois Arnold Gordon. Mrs. Gordon is an avid gardener and has large flower beds that are gorgeous. In the future, the family tradition will be passed on to Lois' great nephew. In the past 102 years, over 93% of the possible recorded elements of temperature and precipitation have been reported. Thank you for your family's dedication and service over all these years!

The location of Purdum, NE (above) and one of the flower gardens at Purdum (right).

All Time Records (Snowfall from 1948-2005)	
High	114 ºF on June 24th, 1940
Low	-36 ºF on December 22, 1983
Precipitation	4.87" on May 7, 1977
Snowfall	12.0" on Mar. 30, 1949 and Apr. 18, 1995

Monthly and Yearly Averages (1971-2000)

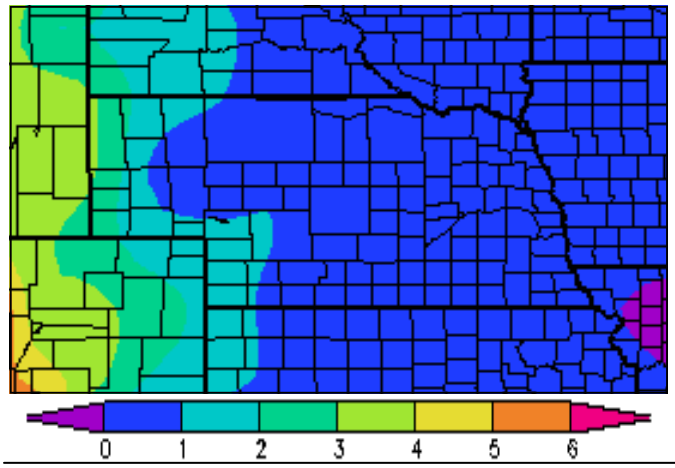
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High	35.1	41.2	50.0	61.1	71.3	81.5	87.3	85.8	77.5	65.9	47.5	38.4
Low	8.3	13.7	22.5	32.9	44.4	53.9	59.5	57.6	47.1	34.3	20.5	11.3
Precip	0.45	0.68	1.45	2.31	3.87	3.18	3.11	2.37	2.02	1.32	1.11	0.45

	High	Low	Mean	Precip	Snow
30 Year Avg	61.9	33.8	47.9	22.32	29.0

Average Monthly Snowfall

The High Plains Climate Atlas is composed of a series of maps with various climatic variables being represented. In most instances, 77 years of data (1920-1996) were used to comprise the maps. Localized effects and topographical effects are not represented well by the maps and should be analyzed more in areas known to have drastic climate changes due to elevation or land formations. Below are snowfall maps based on the historical records. These maps depict the average snowfall over a long period of time and may not reflect the snowfall for the coming season.

Inches of Snow for October



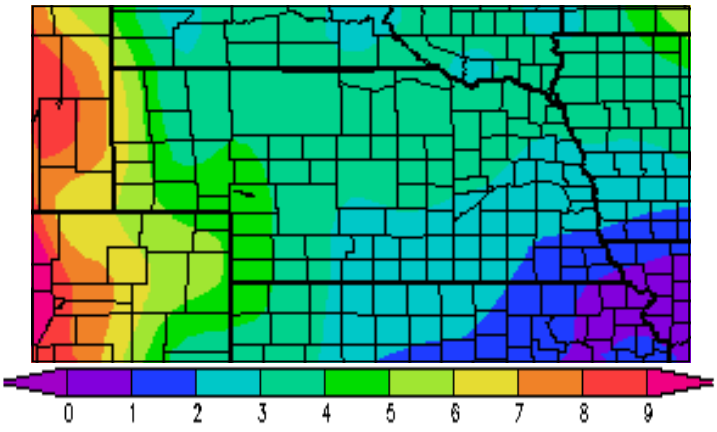
October

Snowfall is normally sparse in October, with the highest accumulations occurring over the extreme Northwestern Panhandle, where 3-4 inches may accumulate in a typical year. Snowfall amounts trail off sharply over the rest of Nebraska, where generally an inch or less piles up. A notable exception can occur over the Southwest Corner, as weather systems exit the Wyoming and Colorado Rockies. Generally, the higher the elevation, the greater the snowfall amount. The Nebraska Panhandle experiences a rapid increase in elevation toward the west into Wyoming and Colorado.

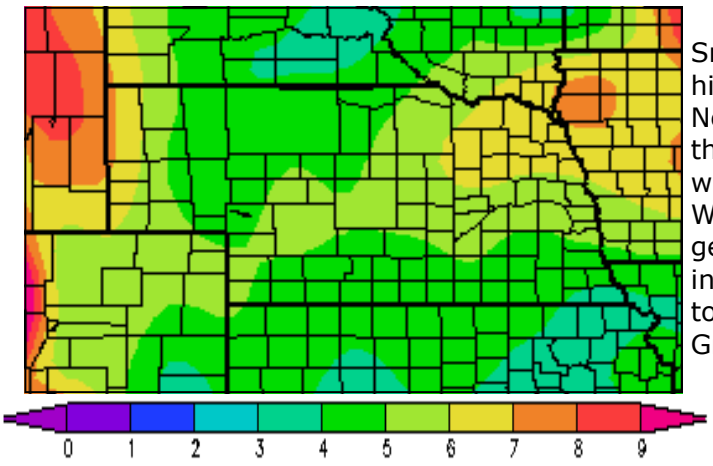
November

The trend continues in November with the heaviest snowfall being found along the Wyoming-Colorado-Nebraska border areas, where 6-7 inches will fall on average. As with October, Southwest Nebraska can see somewhat higher snow amounts than much of the rest of state. North of the Platte River, in Central and Western Nebraska, the average snowfall approaches that seen over the Southwest. Typically accumulations of 5 inches fall in these locations.

Inches of Snow for November



Inches of Snow for December



December

Snowfall patterns in December indicate that the highest accumulations are along the Wyoming-Nebraska border, with snowfall of 6-8 inches and to the Northeast Nebraska-South Dakota-Iowa region, with 6-7 inches expected in a normal year. The Western Sand Hills of Nebraska have lower snowfall, generally 4-5 inches. Interestingly, a swath of 5-6 inches may be found from Chase and Perkins Counties to the northeast and east into Holt, Boyd, Wheeler and Greely Counties, including Lincoln and Custer Counties.

Happenings Around the Area

Two teams of National Weather Service employees from North Platte and Hastings faced off during a recent intra-office softball game held on September 9th in Kearney, NE. In light of the recent devastation caused by Hurricane Katrina, the Meteorologists in Charge from the two offices donated $5.00 for each opposing team's run. An additional match of $5.00 per Side Lobe run was donated from Hastings. Free-will donations were accepted to supplement the per run donations. The final score was **Weather or Naught** 23, **Side Lobes** 13. The softball game generated $335 for the Federal Employee Education & Assistance Fund Hurricane Fund.

On Tuesday, Oct. 18th, 2005, Deb Blondin attended the Ainsworth Wind Farm Dedication. This was a very nice dedication with Bill Fehrman, CEO of NPPD, heading the ceremony. Others that addressed the guests were Governor Heineman, District 43 Senator Deb Fischer, District 38 Senator Ed Schrock, and District 5 Senator Don Preister.

The site has 36 turbines and extends from near Highway 7 to about 4 miles west of the highway and is about 2 1/2 miles long north to south. The turbines are somewhat randomly placed on the various ridge tops. They do not want the turbines in a line because if the wind blows down that line, each successive turbine will have a loss of wind power.

With about 9 mph winds, the turbine can output about 28 kilowatts of power. This increases to a maximum of about 1,650 kilowatts of power when the winds are about 29 mph. With higher winds, the turbines don't have as efficient power conversion. The turbines shut down at about 45 mph winds. Total capacity of the wind farm is 60 megawatts of power. In other words, the wind farm can support approximately 119,000 homes.

Web Site Changes

You will notice significant changes to the front page of our website. The Advanced Hydrological Prediction Service (AHPS) and Climate pages have undergone dramatic changes. All the information that was on the old pages is included in the new ones, but just in a different location. The Satellite Imagery page has been completely redone with satellite images tailored to Nebraska. Ultimately, we plan to update every page on our website over the next year, to improve the look and feel in addition to providing a greater level of interactivity and information pertinent to western Nebraska.

CLIMATOLOGICAL CALENDER

Climatological Data for June, July, August, September 2005

prepared by Christina Hannon, Meteorological Intern

Location	Month	Average	Departure	Rain	Departure	Highest	Lowest
North Platte	June	70.3 ºF	+1.9 ºF	5.07 inches	+1.90 inches	95 ºF (23rd)	43 ºF (1st)
	July	77.1 ºF	+2.8 ºF	1.26 inches	-1.91 inches	105 ºF (30th)	43 ºF (27th)
	August	72.7 ºF	+0.1 ºF	2.78 inches	+0.63 inches	104 ºF (2nd)	47 ºF (31st)
	September	67.9 ºF	+5.5 ºF	0.17 inches	-1.15 inches	98 ºF (21st)	28 ºF (29th)
Valentine	June	69.6 ºF	+2.0 ºF	7.71 inches	+4.70 inches	98 ºF (23rd)	46 ºF (15th)
	July	75.3 ºF	+1.6 ºF	3.31 inches	-0.06 inches	106 ºF (23rd)	43 ºF (27th)
	August	73.0 ºF	+0.9 ºF	2.40 inches	+0.20 inches	105 ºF (2nd)	47 ºF (5th & 28th)
	September	67.2 ºF	+5.7 ºF	2.39 inches	-0.78 inches	97 ºF (4th)	35 ºF (28th & 29th)

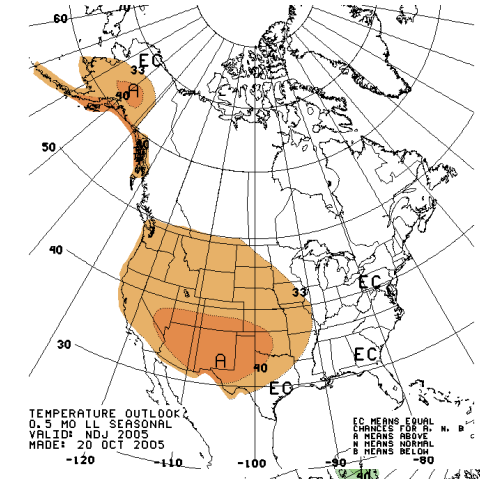
Normal High/Low Temperatures

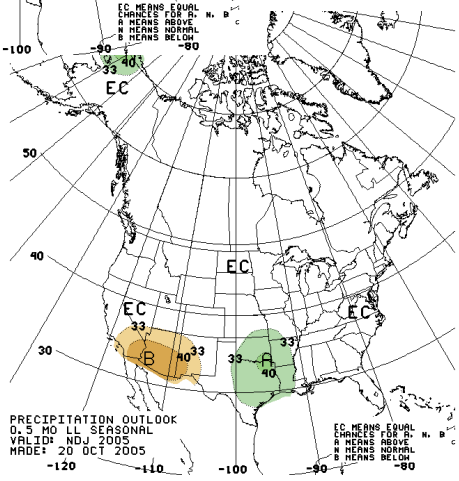
Location	Nov 1	Dec 1	Jan 1	Feb 1
North Platte	56/27	42/15	36/10	39/12
Valentine	54/26	40/14	34/8	36/10

November-December-January 2005-2006 Outlook

The temperature forecast for the November to January season is above normal across the Western two-thirds of the United States. We have already seen temperatures over the fall above normal and expect a warm end to the year.

The precipitation forecast is less certain as there are equal chances to be above normal, normal, or below normal. Normal precipitation values during these months are 1.55 inches in North Platte and 1.35 inches in Valentine.





Temperature (above) and Precipitation (right) outlooks for the winter season of 2005-2006.

CLIMATE OUTLOOK KEY

The key below is used to interpret each of the color versions of the ***Climate Outlook*** products. In areas where confidence in predictive skill has been established, the probabilities of the normal, near normal or below normal categories are increased accordingly above the Climatology level of 1/3 (33.3%) for each category. These probabilities are contoured using colors as depicted in the key below.

In those area where the skill of our present prediction tools is not sufficient, the default is equal chances (white color). The probabilities of experiencing each of the three categories (above normal, near normal or below normal) remain equally likely (1/3) in the white areas on the maps to the left. The outlined percentages below correspond to the values on the map.

Precip	Temp	Probability of Occurence: Above	Near	Below	Most likely category
		80.0%-90.0%	16.7%-06.7%	03.3%	"Above"
		70.0%-80.0%	26.7%-16.7%	03.3%	"Above"
		60.0%-70.0%	33.3%-26.7%	06.7%-03.3%	"Above"
		50.0%-60.0%	33.3%	16.7%-06.7%	"Above"
		40.0%-50.0%	33.3%	26.7%-16.7%	"Above"
		33.3%-40.0%	33.3%	33.3%-26.7%	"Above"
		33.3%-30.0%	33.3%-40.0%	33.3%-30.0%	"Near Normal"
		30.0%-25.0%	40.0%-50.0%	30.0%-25.0%	"Near Normal"
		33.3%-26.7%	33.3%	33.3%-40.0%	"Below"
		26.7%-16.7%	33.3%	40.0%-50.0%	"Below"
		16.7%-06.7%	33.3%	50.0%-60.0%	"Below"
		06.7%-03.3%	33.3%-26.7%	60.0%-70.0%	"Below"
		03.3%	26.7%-16.7%	70.0%-80.0%	"Below"
		03.3%	16.7%-06.7%	80.0%-90.0%	"Below"
		33.3%	33.3%	33.3%	"Equal Chances"

For more information visit http://www.cpc.ncep.noaa.gov/

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Check out our website at weather.gov/northplatte

We have snowfall measurement videos available. If you would like a copy to refresh your memory on snowfall measurements, please call our office to request your copy. We also have snowboards if you need one, let us know.!